

Installation Instructions

hp StorageWorks ESL E-Series Tape Library Cluster Upgrade

*Read instructions completely before
beginning the installation procedure*



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About this document

This document provides instructions for adding a tape drive cluster to an HP StorageWorks ESL E-Series tape library.

Before you begin



Caution: Before continuing with the installation procedure, ensure the library is powered off and that the main switches on the power distribution unit are turned off (to the left).

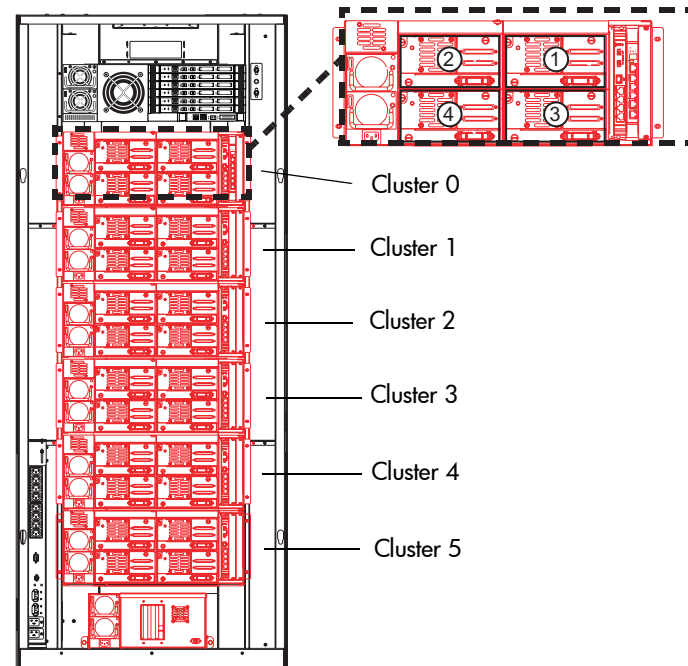


Caution: Parts can be damaged by electrostatic discharge. Keep parts in their containers until needed. Ensure you are properly grounded when touching static-sensitive components.

Installing the drive cluster

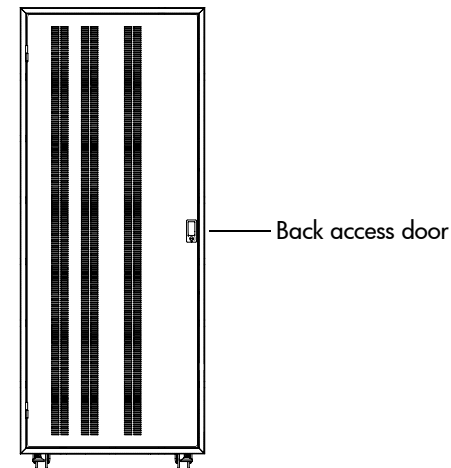
The library may contain up to 24 tape drives in 6 drive clusters (see Figure 1).

Figure 1: Drive cluster numbering



1. Make sure the back door of the library is open to access the drive cluster bays (see Figure 2).

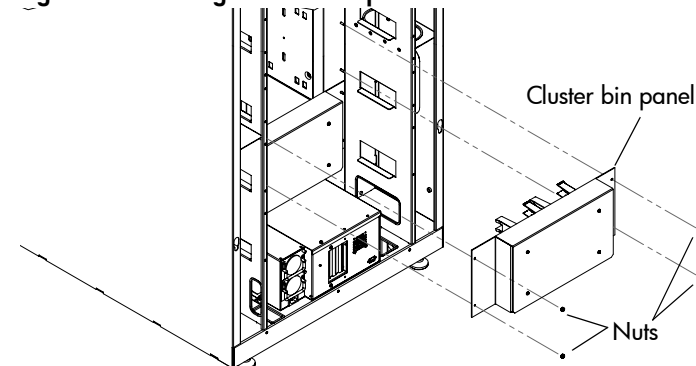
Figure 2: Library (back view)



Note: Drive clusters must be installed sequentially from top to bottom (clusters 0 through 5). There can be no gaps between drive clusters.

2. Before continuing with the installation procedure, ensure the library is powered off and that the main switches on the power distribution unit are in the off (left) position.
3. Using a 11/32-inch nut driver, remove the four nuts securing the cluster bin panel to the library (see Figure 3).

Figure 3: Removing a cluster bin panel

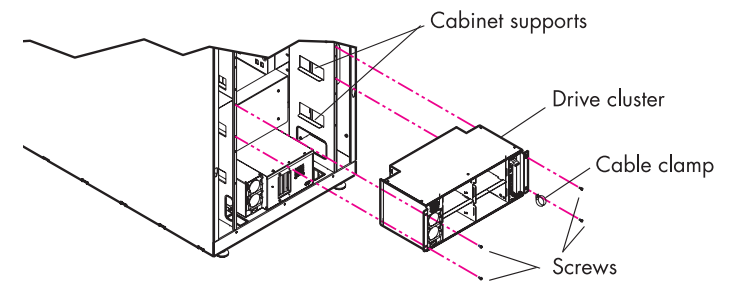


Note: Retain the cable clamp and ensure it remains attached to the drive cluster (see Figure 4). The clamp will be used for routing SCSI cables.

4. Align the drive cluster with the cabinet supports and insert it into the library.
5. Add the cable clamp on top of the lower right screw hole on the cluster.

6. Secure the cluster and cable clamp to the library frame using four Phillips screws (see Figure 4).

Figure 4: Installing the drive cluster

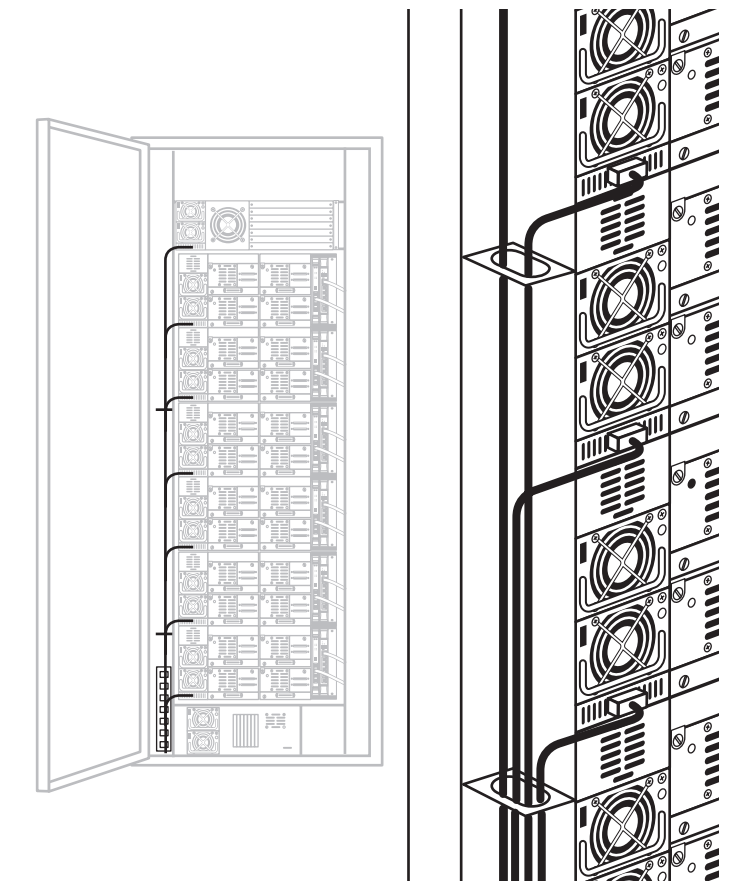


7. Repeat step 2 through step 6 for each additional drive cluster to be installed.

Connecting drive cluster cables

1. Connect a power cable from the front of the power distribution unit, located on the lower left side of the library, to the drive cluster power connector below the power supplies by routing it through the left cable access channel (see Figure 5).

Figure 5: Connecting the cluster power cable

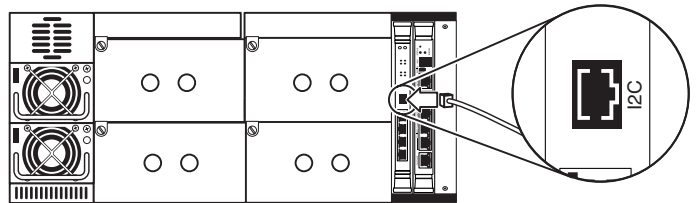


2. Connect the I²C communications cable located to the right of each drive cluster to the I²C connector on the cluster controller (see Figure 6).



Note: I²C cables are labeled “P0” through “P5” and correspond to the drive clusters. Ensure you use the appropriate cable for the drive cluster being installed (that is cable “P1” for drive cluster “1”).

Figure 6: Connecting the I²C cable



3. Review Table 1 before connecting the drive cluster Ethernet cables. How you connect these cables will depend on how many drive clusters are installed in the library.

Table 1: Cluster Ethernet cable connections

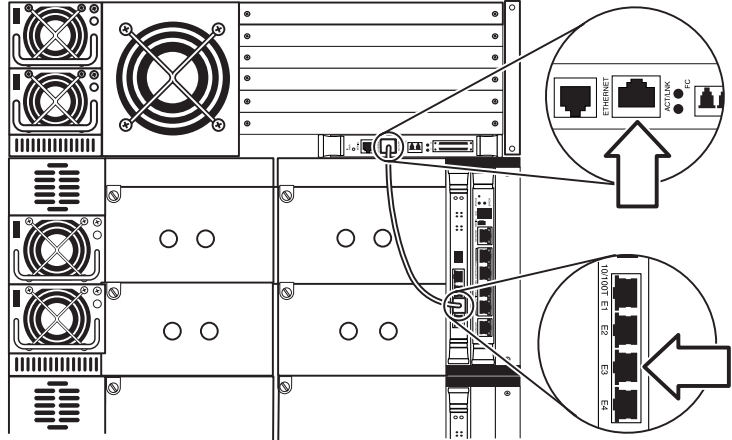
Drive cluster	Cluster controller Ethernet port	Ethernet cable
0	E1	Cabinet controller
	E2	Interface Manager card
	E3	e2400-160 interface controller
	E4	Daisy-chain to lower cluster controller
1	E1	Daisy-chain to upper cluster controller
	E2	e1200-160 robotics controller
	E3	e2400-160 interface controller
	E4	Daisy-chain to lower cluster controller
2 through 5	E1	Daisy-chain to upper cluster controller
	E2	Not used
	E3	e2400-160 interface controller
	E4	Daisy-chain to lower controller (not used for cluster 5)

Note: Depending on which drive cluster you are installing, some of the following steps may have already been completed during a previous installation. If you are adding drive cluster 1, some cables on drive cluster 0 will need to be moved or removed.

4. If adding drive cluster 1, connect the 3 ft green Ethernet cable from Ethernet port “E2” on the cluster controller to the Ethernet port on the robotics controller card (e1200-160) located in the bottom slot of the card cage (see Figure 7).

Note: If you are installing drive cluster 1, you will need to remove the cable from drive cluster 0’s controller card at port “E4” and connect it to port “E3” on drive cluster 1’s cluster controller card. A daisy-chain Ethernet cable will replace it as outlined in step 5.

Figure 7: Connecting the Ethernet cable to the robotics controller

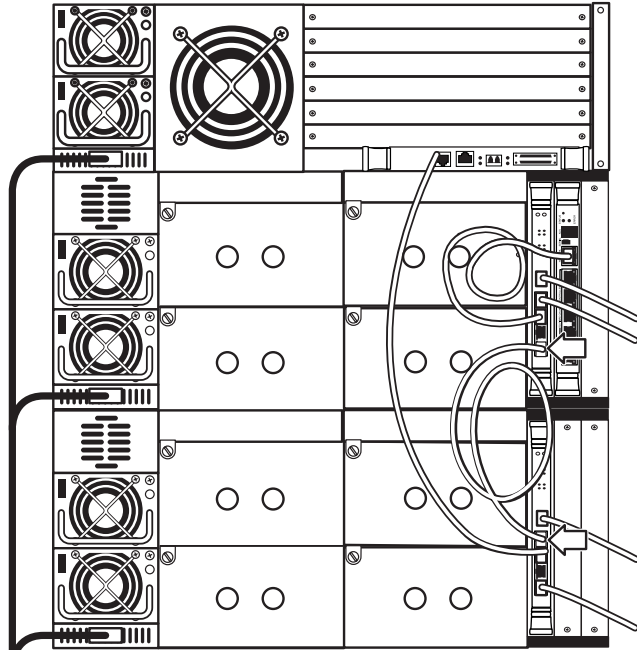


5. Add a 1 ft gray Ethernet cable from Ethernet port “E4” on the cluster controller in the upper drive cluster to Ethernet port “E1” on the cluster controller in the drive cluster below it (see Figure 8).

Continue daisy-chaining until you have done this procedure for all the drive clusters.

Note: When daisy-chaining drive clusters, do so from Ethernet port “E4” on the top cluster to Ethernet port “E1” on the cluster below. This will help keep the cables clear from the other Ethernet cables on the cluster controller card.

Figure 8: Daisy-chaining drive clusters



Installing tape drives

The new drive cluster is now ready for tape drive installation. Proceed to the installation instructions that came with the tape drive upgrade kit.